Alexander Wilson Agricultural Works Complex
County Route 4
Newark vicinity
Pencader Hundred
New Castle County
Delaware

HABS No. DE-209

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DEL,
2-NEWARK.V,
6—

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED MEASURED DRAWINGS

HISTORIC AMERICAN BUILDINGS SURVEY
MID-ATLANTIC REGION NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106

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HISTORIC AMERICAN BUILDINCS SURVEY

ALEXANDER WILSON AGRICULTURAL WORKS COMPLEX HABS No. DE-209

Location: North side of Chestnut Hill Road 600 feet from the intersection of Routes 4 and 72, Pencader Hundred, New Castle County, Delaware.

USCS Newark East Quadrangle, Universal Transverse Meridian Coordinates: 18.436680.4390260

Present Owner: Delaware Department of Transportation
Dover, Delaware

Present Occupant: Demolished, September, 1983

Significance: The Alexander Wilson complex is an outstanding example of a mid-nineteenth century rural business grouping containing a house, barn, and agricultural implements works. The buildings are one of the last vestiges of rural life in an area that has been heavily developed for residential, industrial and commerical use.

PART 1. HISTORICAL INFORMATION

A. Physical History:

1. Date of erection: The house appears on the 1849 Rea and Price Atlas of New Castle County. About this time the property was purchased by Alexander Wilson and what had been a two family workers' house was expanded into a large single family residence. By 1860 all the existing buildings were in place and Wilson was advertising in the business directory on the Lake and Beers Atlas of 1860.

2. Original and subsequent owners: The following is an incomplete chain of title to the land on which the complex stands. Reference is to the New Caslte County Deed Books, Delaware State Archives, Dover, Delaware

1843 Deed, Book Q, Volume 6, page 27
Thomas B. Armstrong to John R. Hill

1853 Deed, Book L, volume 6, page 458
John R. Hill to Alexander Wilson

1896 After Wilson's purchase of the property in 1853 it descended through the family to John Wilson in 18 , and then to Sarah Wilson Slack in 19 . The property was condemned for road improvements in 1983 by the Delaware Department of Transportation.

B. Historical Context:

The Alexander Wilson Agricultural Works operated in Pencader Hundred, New Castle County, Delaware, from 1851 till 1896. Wilson served a primarily rural clientele in both Pencader Hundred and White Clay Creek Hundred. His shop and home are located on Chestnut Hill Road between Route 73 and the railroad. The area is often called Wilson Station for the former freight stop on the old Delaware and Pennsylvania Railroad located near to the shops. Both the railroad and the iron companies from the Iron Hill area of Pencader Hundred came to him for repairs on their equipment.

While he advertised on the 1881 Hopkins map of New Castle County as having an Agricultural Implements Works, most of his work was as a blacksmith and wheelwright. Wilson left behind two sources of information about his business. The first is the physical remains of his shop, barn, and house; and the second is a series of account books that describe in detail the business in which he was engaged.

The shops and residence are built on less than five acres of land. Prior to condemnation proceedings they belonged to Sarah Wilson Slack (Alexander Wilson's granddaughter). Her father, John Wilson, did not carry on his father's business, but rather converted the machine shop into a grist mill. The machine shop, torn down years ago, contained the steam engine that provided power to both Wilson businesses.

Alexander Wilson's account books are of three types. The first set lists individual customers and the work he performed. He kept a running total of debts and credits for his customers. These books begin in 1851 and end in 1875. The second set recorded the work he did day by day. These books survive for the period from 1860 till 1877. The third set was used to record on a daily basis the amount of cash his customers paid and the amount he paid out not only for his business but also for his household. This last set of books runs from 1862 till 1872.

Alexander Wilson was born in 1829 in Cecil County, Maryland, and moved later to Pencader Hundred. In 1852, he married Sara Jane Clendendon, the daughter of a local miller. His account books indicate that he began business in 1851, but he did not buy the land on which the shops are located until 1853. Prior to that time the land and shops were owned by John R. Hill (New Castle County deed book L, volume 6, page 458). Wilson paid $1400 for the property which was just over two acres. Hill was a wheelwright. He bought the land from Thomas B. Armstrong in 1843 for $112.40 (New Castle County deed book Q, volume 6, page 27). The 1853 deed lists Hill as living in Cecil County, Maryland. According to Mrs. Slack, the Hill family lived in the west half of the house, while the Wilson family used the east half. Both families apparently shared the cooking facilities in the lower level.

The 1850 Census of Manufactures indicates that Hill had a cartwright and wheelwright shop that employed two men and produced carts and wagons. He had invested $2000 in the business and produced goods worth $1000 that year. The 1860 census of manufactures lists Wilson as a blacksmith. He had invested $450 in the business that year. His costs for raw materials were $302 for iron, steel and coal. He employed two men who were paid $720 for the year. Having spent $1022, he was able to annually produce six wagons for $480, wheels for $200, shoeing for $300, and did other work for $200. The total was $1180, leaving him a surplus of $158.

Pencader Hundred had a population of 2468 people in 1860. There were 445 families in the hundred. The wheelwright and blacksmith population for the hundred was seven wheelwrights, four apprentices, and seven blacksmiths. Of this group, only two are listed as having any real estate holdings. One was a wheelwright named

Jacob Boya, who possessed real estate holdings worth $1800. The other was Wilson, worth $2000. The value of Wilson's peraonal estate was $985; the closest to him in that category was worth $825.

Wilaon's household consisted of him, his wife Sara Jane, three children under six years old, a wheelwright named John Robins (age 25), and Sara Jane's sister Margaret Clendendon (age 19).

White Clay Creek Hundred had a population of 2843 in 1860, with a total of 528 families. The hundred also had a population of six wheelwrights, two apprentices, thirteen blacksmiths, and six apprentices. The average value of their real estate holdings was $1683.33 and of their personal estate was $312.92. While nucleated settlements in Pencader Hundred had consisted of only a series of hamlets or villages, White Clay Creek Hundred contained two large population centers in the towns of Newark and Christiana. In 1860, Newark had 876 people and Christiana had 443.

The Census of Manufactures lists no wheelwrights shops as such in Pencader Hundred and only John Laywell's blacksmith shop in addition to Wilson's. Wilson listed his trade as a blacksmith in the census, but he did employ a wheelwright. White Clay Creek Hundred had three blacksmith shops and one wheelwright shop. The output of all these shops was carts and wagons, horseshoeing, and repairs. Most of the shops did about the same amount of business except for two blacksmith shops in Newark, where Samuel Wright did $1575 worth of business and Israel Pritchard did $1705. All of the shops together employed twelve men besides the shop owners. Those wheelwrights and blacksmiths not employed in sbops were most likely employed in carriagemakers' shops, in Newark textile mills, or in some other industry in the two hundreds.

The 1870 census of manufacturers records the blacksmiths and wheelwrights as doing the same types of business. There were more people in the business: Pencader Hundred had six shops and White Clay Creek Hundred had five shops. The Wilson shop, tbough, had changed radically. Now he listed his business as macbinist, wheelwright, and blacksmith. He also ran a 15-horsepower steam engine to power his machinery. Other machinery included three lathes, one circular saw, and two other saws. He employed six men and produced $5,000 worth of goods per year--by far the largest operation in the two hundreds. His six employees earned $1,400 a year in aggregate wages and used $2,240 worth of raw materials in the business. By this time Wilson had invested $4,000 in his shops. The only operation close to Wilson's in size was the wheelwright and blacksmith shop of Hill and Pritchard in Newark. This shop employed three men for ten months during the year. They concluded $4,956 worth of business in 1870, half of which was in repairs made for customers. The 1870 census also indicated that Christiana had a shop devoted to the manufacture of agricultural implements. Tbis was the Casho Machine Co. listed in the 1880 Census of Manufactures. It operated for

only one-half year with five men employed in the business. The shop used water power to run its machinery and produced six horse plows worth $1,050, six threshers worth $1,050, seven horse rakes worth $175, and did repair work worth $1,000 for a total of $3,275.

The Census of Population for 1870 lists 2580 people in Pencader Hundred in 454 families. White Clay Creek Hundred had 2621 people in 530 families. Pencader Hundred had 11 wheelwrights, 3 apprentices, 8 blacksmiths and 1 apprentice. White Clay Creek Hundred had 7 wheelwrights, 13 blacksmiths and 3 apprentices. John R. Hill, who had sold Wilson his shop and land in 1853, had returned to Newark and was in business with Israel Pritchard. The 1870 Census of Manufactures indicates that the shops of the two hundreds employed 54 men. Only 29 men are listed as wheelwrights and blacksmiths in the population census. This would indicate that the employment situation for these people was very favorable. Wages, however, declined from 1860 to 1870. Wilson's wages per man dropped from an average of $360 per year to $233 per year.

Wilson's personal household had grown. Besides his wife, Sarah, and the children, John, Eliza and William (all attending school), Mia Townsend (age 6) (a female domestic servant), ___Holland (age 16), blacksmiths William Kelly and ___ Chambers, and wheelwrights James Jones and William Worrell all lived in the Wilson home.

Within the 1880 Census of Manufactures there was a special census for agricultural implements works. The only one listed in either hundred is the Casho Machine Company on the Christiana River near Newark. It employed ten men and produced large farm machinery (cultivators and threshers). It used a 15 horsepower overshot water wheel to run its equipment. Wilson is not listed in this special section, although he advertised himself as making agricultural implements in 1881. If he was making agricultural tools at his shop, they most likely were hand tools (rakes, hoes, shovels).

The 1880 Census lists Pencader Hundred with five blacksmith and wheelwright shops and White Clay Creek Hundred with eight shops. No firm in White Clay Creek Hundred produced more than $2,500 worth of goods that year. Israel Pritchard's blacksmith shop did $2,000 worth of business that year and blacksmith Joseph Lutton did $2,500. In Pencader Hundred the wheelwright shop of Washington Barron conducted $3,000 worth of business, the blacksmith and wheelwright shop of Robert D. Moss did $3,800, and Alexander Wilson did $7,600.

By 1880 Wilson had invested $8,000 in his business and had seven men working for him who earned $3,000. He paid his skilled labor $1.75 per day; the unskilled labor received $1.50 per day. The business used $3,200 worth raw materials. Based on the figures that he gave to the federal government, his profit for the year was $1,400.

While it would appear that Wilson was a successful man in terms of total investment veraus return, other shops were just as profitable. Robert D. Mosa of Pencader Hundred had a blacksmith and wheelwright shop listed in the 1880 census. He invested $2,000, paid four men $1,000 that year and used $1,385 for raw materials. He produced $3,800 worth of goods for a profit of $1,415. This is $15 more that Wilson made with an investment $6,000 larger. Wheelwright Washington Barron invested $2,500 and employed two men. He paid them $500, used $1,000 worth of raw materials, and produced $3,000 worth of goods. His profit was $1,500 for the year.

The population census for 1880 shows changes in the Wilson household. Wilson listed his occupation as machinist as does his son John, now 26 years old, and his son William, now 22 years old. The daughter Lidia, 24 years old, lived at home. They have two servants living with them; Mary Townsend, 16 years old, and 13-year-old Levi Bonsell, an errand boy. Blacksmith Henry Weaver is listed as a boarder. The very next household in the census record is that of blacksmith Albert Reed, suggesting he was employed in the Wilson shop. The population of Pencader Hundred in 1880 was 2,352 people in 430 households. There were 8 wheelwrights, 3 machinists, and 15 blacksmiths in the two hundreds. In this year as in years previous, the employment situation for wheelwrights and blacksmiths was favorable.

The third component of the Wilson shops analysis is the use of the various ledger books to compare what Alexander Wilson reported to the census takers in 1860 and 1870 and also to study the growth of his business over a period of time. These books allow a monthly comparison in dollar amounts of his output, his income, and his business and household expenses. His cash expense book does not always record whom he paid or for what, but rather where he spent the money. He never itemizes employees' wages and did not always differentiate between household and business expenses.

During this period, the work he performed was for farm machinery repairs. He also worked as a ferrier shoeing mules and horses for local farmers and the iron industry at Iron Hill, as well as repairing railroad equipment after the railroad was put through in the early 1870s. His account book for 1863 to 1869 listed over 200 separate customers, and from 1869 to 1873 listed over 350 customers.

For the census years 1860 and 1870, the figures in his books do not agree with the figures reported to the U.S. Census Bureau. In 1860, he listed his total business with the census as $1,180; the total in his books is $1,603.04. This may be accounted for by the fact that the census was taken at midyear, not at the end of 1860. Consequently he would not be reporting only 1860 income but some 1859 income as well. In 1870 however, he told the census taker that he did $5,000 in business,

yet his books for 1870 indicate that he did work amounting to $2771.89. The day books indicate that Wilson operated his busineas six days a week and occasionally worked portions of major holidaya sucb as Christmas and tbe Fourth of July. His shop was very busy most of the year and only slowed down in November and December. He almost always received payment in cash, but not always at the time the work was completed. There is a gap of about six weeks in the day books in June and July 1873. Wilson died in 1896 after having thirteen strokes, one in each of the thirteen years before his death. It is possible that he also had one in 1873 which forced him to curtail his business. One item of work not reported in the surviving ledger books is that, according to family tradition, Wilson assembled prefabricated iron bridges. His granddaughter reports that in the early 1920s she and her father were still able to find three surviving bridges, including the one at nearby Cooch's Bridge.

PART II. ARCHITECTURAL INFORMATION

A. General Statement:

1. Architectural character: Built in Pencader Hundred south of Newark, Delaware, the Alexander Wilson complex is an outstanding example of a mid-nineteenth century rural business grouping containing a house, barn, and agricultural implements works. The buildings are one of the last vestiges of rural life in an area that has been heavily developed for residential, industrial, and commercial use.

2. Condition of the fabric: At the beginning of this recording project all the buildings were in excellent condition and occupied by descendents of Alexander Wilson. At the close of the project the buildings had been condemned for a highway improvement program, abandoned, and heavily vandalized prior to their scheduled demolition in September 1983.

B. Description of Exterior:

1. Overall dimensions:

a. Dwelling: The two-and-a half story house has a finished cellar kitchen under the southeast corner room and two roughly finished storage cellars under the southwest and northeast corner rooms. Although preparations for a cellar under the northwest corner rooms were made, this area was never excavated. The gable fronted building, which was erected in two construction periods, is roughly square in shape and measures 30'-6" across the front and 30'-3" in depth. An open, one-story porch 7'-9" deep and 29'-4" wide was built across the south elevation and enclosed in the mid-twentieth century.

b. Agricultural Works: The two-story shop is rectangular in shape measuring 50'-6" in length and 20'-6" deep.

c. Barn: The two-story barn with its gable end front and off-center gable roof is 29'-6" in length and 18'-3" deep.

2. Foundations:

a. Dwelling: The rubble fieldstone walls of the cellar are 1'-5" thick. Built into a slight embankment, the foundation walls on the east elevation rise above modern grade, while

on the west elevation they stand only at grade.

b. Agricultural Works: Rubble fieldstone walls 8" thick rise to a height of 2'-3". In the shop they form a knee high interior wall on the main floor on which the frame superstructure rests.

c. Barn: Rubble fieldstone walls capped with two courses are 8" thick and rise to a height of 4". As in the shop the foundations in the barn rest at floor level with the frame.

3. Wall construction: The walls of all three buildings are timber framed.

a. Dwelling: Exterior walls are of principal post and stud contruction 6" thick. The exterior was originally covered with a ten-inch face whitewashed weatherboard and later covered with asbestos shingle.

b. Agricultural Works: Exterior walls are of principal post and rail construction originally covered with 9" to 1'3" face tongue-and-groove vertical board siding and later covered with asbestos shingle.

c. Barn: Exterior walls are of principal post and rail construction originally covered with vertical board-and-batten siding with face. Sections of the north and an average 1' east elevations were resided at a later date with similar materials.

4. Structural system, framing:

a. Dwelling: Exterior walls and interior partitions in the original block are of braced frame construction with 5 1/2" x 3 3/4" plates and wall plates tenoned into 6" x 4" corner posts. Sway braces 5" x 2 1/4" run between the principals on 1'4" centers and are tenoned into the horizontal members. Ceiling joists 7 1/2" x 2 1/2" lap over the plates on 1'5" centers. The rear addition is also of braced frame construction with 4" x 7 1/2" corner posts, 4" x 2" studs 1'-4" on center, 8" x 3" joists 1'-9" on center, and 4" x 6" plates. Joists in both sections span only one bay lapping over stud framed partition walls.

b. Agricultural Works: Exterior walls and partitions are of braced frame post and rail construction. Five bents framed on principals define four unequally sized interior bays. The principal posts are 8" square at the base where they are seated on 9" x 6" sills laid flat, and rise two full stories flaring into the building at the eves as

1' x 8" posts. Set into an open faced trench at the post tops are 6 1/2" x 6 1/2" plates. Riding over the plates are 3" x 7" joists set on irregular centers ranging from 3'-1" to 2'-3". Set between the joists are partial joists or outriders aiding in the support of a board false plate 3 1/2" x 2 1/2" laid flat. The joists and outriders are finished with beveled upper surfaces forming the extension of the eve line 7" beyond the planes of the front and rear elevations for a cornice. The common rafter roof is composed of 25 pairs of blades.

Between the principal posts are 3" x 3" stud framed openings and 3" x 3" rails in the attachment of siding. Diagonally placed up-braces of 4" x 3" timbers run from the principals to plates, girts, wall plates and the 6" x 6" tie beams in the east central bent. Wall plates 6" x 7" are butted and joined to the sides of the principals. The second-story floor joists 3" x 9" on 1'5" to 2' centers are lapped over the wall plates. There are no joists for the earthern floored first story. Carpenters marks on the framing indicate the building was raised timber by timber rather than in a series of fully framed bents.

c. Barn: Exterior walls and partitions are contemporary to and of the same lumber stock as the Agricultural Works.

Flooring, corner posts, post and rail construction common rafters 2' on center and stud framed openings are all comparable to the shop.

Notable differences however, are evident in the juncture at roof and wall and in the internal partitions. The barn roof rests directly on a 7 1/2" x 7 1/2" plate. The rafter feet extend 1' out from the plate and have concave molded tails creating an open cornice. The original shed roofed leanto to the east is built of common rafters nailed to the backs of the rafters covering the main block of the barn. These 3" thick timbers decrease in size from a 4" depth at their meeting with the outside plate to 3" at their lapping over the rafters of the main block. No joists frame in the overhead loft although single 3" x 6" and 3" x 9" ties span the breadth of the two bays. Internal partitions are composed of 3 1/2" x 5 1/2" studs regularly spaced between central 5 1/2" x 5 1/2" principals. The interior partitions are clad with horizontal 1" x 9" board siding and 1" x 2 1/2" slats for ventilation.

5. Porches:

a. Dwelling: A one-story, tetra-style porch 29'-4" x 7'-3" spans the south elevation. Four squared columns 10" x 10"

at the base and 9" x 9" at the cornice line supported the porch roof on approximate 9'-6" centers. The columns were unadorned except for plainly molded Doric-like capitals. Balustrades run between the outside pairs of columns and are built of stick balusters on 5" centers joined to unornamented base and hand rails. The porch framing is carried on 1" thick stone walls running out from the foundation wall. Overhead the porch ceiling is composed of boards placed to create a shallow paneled finish. The entire porch support system was disassembled in the mid-twentieth century and stored in the second floor of the shop.

In the mid-twentieth century two additional porches were built onto the house. A one story concrete slab porch was added onto the north real elevation and a one story frame, vertical board sided porch on a concrete block foundation was added to northeast corner of the east elevation.

6. Chimneys:

a. Dwelling: Two main chimneys rise through the house piercing the roof line at its juncture between the original block and the rear addition. The east pile contains two flues with hearths opening in the cellar kitchen and the main first-story room. The west chimney contains a single flue with a hearth opening in the adjacent first story room. Both piles have rubble stone foundations and brick stacks above the cellar level. Where the chimneys pierce the roof, they have been stuccoed with cement.

b. Argricultural Works: The shop contains two brick flues. The flue located in the east end of the building rests on a raised flagstone base and has a small firebox. Iron pins and hooks fixed to the ceiling joists on the ground floor indicate the former presence of a bellows. At the second story the brick flue jogs approximately 1' over towards the east wall to increase the draft for the blacksmithing activities located on the floor below.

A second brick flue began at the second floor level and was placed on the east side of the first bent in from the west gable end and against the north wall. A tarring bench next to the flue suggests the function of this stack lay in the heating of tars, oils, and other finishes for weatherproofing wagons.

7. Openings:

a. Dwelling:

(1) Doorways and doors: Original doors are of 15 inch board-and-batten construction for the stair well, and of shallow paneled stile-and-rail construction for the primary entries. All are doors hung on cast-iron butt hinges and the southern doors retain cast-iron box locks. The exterior surrounds of the south doorway have a 4" face and are built up with applied quirked, quarter round moldings and half round trim pieces 1" in diameter.

(2) Windows: Openings are 2'-11" x 4'-6" on the first and second floors and fitted with 6 over 6 light sash. Two round arched over-sash windows 4' x 2'-6" illuminate the finished south attic over the original portion of the house.

b. Agricultural Works:

(1) Doorways and doors: The first floor doors of the shop are all replaced board-and-batten double doors hung on wrought iron strap hinges. In the second story is a pair of double doors centrally placed in the west gable end. The opening, formerly used for raising and lowering wagon beds, was closed and finished over with the application of asbestos siding. The doors, which remain in situ are each four boards across with two horizontal battens and one diagonal batten sloping down from where the doors meet and out to the post defining the opening. The two doors originally were hung on two strap hinges each.

(2) Windows: All windows are 6 over 6 light sash with the top half blocked and nailed in place and the bottom half rising on the interior. The window openings are surrounded by unornamented milled architraves.

c. Barn:

(1) Doors and doorways: all doors, both original and replaced, are of board-and-batten construction hung on strap hinges. Single doors open into the central aisle and the stalls, while double doors provide access to the main loft and the wagon bay. A smaller single door opens onto a loft under the east elevation leanto.

(2) Windows: Three six-light sash have been added to the south-west corner stall, and one six-light sash has been added as a transom over the west door of the wagon bay.

8. Roof:

a. Dwelling:

(1) Shape and covering: The roof is a simple gable with a 32.5° pitch originally covered with wood shingle nailed to lath. The roof has been recovered with composition shingle.

(2) Cornice: The north and south gables project 10" beyond the face of the building while the box cornices on the east and west elevations project out 1'. The underside of the box is finished with ogee moldings. Applied to the outer edge of the cornice and eaves are jigsawn quatrefoils 5 1/2" across and 4 1/2" high. The center of each quatrefoil is pierced with a 1 1/4" diameter circular opening.

b. Agricultural Works:

(1) Shape and covering: The roof is a simple gable framed without collars and with a 38° pitch. Originally covered with wood shingle nailed to lath, the roof has been recovered with composition shingle over plywood.

c. Barn:

(1) Shape and covering: The roof is composed of two units--a simple gable raised on 35.5° pitch and hearths built on the east elevation with a 25.5° pitch. Originally covered with wood shingle nailed to both, the roof has been recovered with composition shingle.

C. Description of Interior:

1. Floor plans:

a. Dwelling:

(1) Cellar: Under the main block of the house is a three-room cellar. The room under the southeast corner was built as a basement kitchen 13' x 15'3" with direct outside access, a rubble stone fireplace, and whitewashed walls. A stud framed and plastered wall separates the kitchen from a 13'-3" x 15'-3" room under the southwest corner. Rubble stone piers in this room support the chimney pile rising through the upper stories. The third room 13' x 12'-7"

under the northeast corner is an excavated crawl space walled in with rubble stone masonry on concrete block. Now used as a furnace room this space was originally an unexcavated crawlspace.

(2) First floor: Entry into the house is gained through two front doors-one leading into each of the two front rooms. As first built, the dwelling contained two spatially segregated one-room plan units sharing a stud framed party wall. Both rooms were equipped with open fireplaces and boxed corner stairs. When the house was enlarged in the mid-19th century a door was cut through the partition and the stair taken out of the southwest room. Both rooms measure 19'-3" x 17'-3".

Behind the front rooms were two additional equal sized rooms 14'-3" x 13'-6". The northeast back room was converted into a modern kitchen, while the northwest room became e first floor bedroom with a bath cut into the back of the former stairwell located in the southwest front room.

(3) Second floor: The second floor plan of the house originally mirrored that of the floor below. Later changes, however, required the insertion of a narrow hall leading from the east stair, parallel to the hearth wall of the building and opening into rooms on either side and a bath at the west end. As a result the front bedrooms are 10'-6" x 14'-3" and 9' x 14'-3". The rear bedrooms are both 13'-6" x 14'-3". The hall is 7'-6" wide over the southeast corner narrowing to 6'-6" over the southwest corner with a 6'-6" x 7" bathroom.

(4) Attic: The attic arrangement continues to reflect the division of space made on the first floor following the enlargement of the swelling. Kneewalls under the eaves however, have narrowed the front rooms' dimensions to 17'-3" x 11' in the southeast corner and 17'-3" x 10'-6" in the southwest corner. The rear portion of the attic was originally unfinished, but was enclosed in the mid-20th century to create a single room 17'-1" x 13'-6".

b. Agricultural Works:

(1) First floor: The main floor of the shop is divided into two units. In the west end of the building is a 22'-3" x 19'-11" work area entered from the outside at ground level through paired batten doors.

Located against the east partition wall is an enclosed stair leading up to the second story. In the west end of the building is a large open space entered at ground level through two pairs of battened doors. In the east end of this 27'-9" x 19'-11" room stand the remains of the forge and bellows supports. Along the north wall were hand-operated drill presses and other items for wood and metal working.

(2) Second floor: The second floor is a completely open space except for a 10'-7" x 10'-11" vertical board walled office in the northeast corner. Remaining cupboards and work benches indicate the area was devoted to woodworking and turning for wagon parts.

The office contains a smaller "L" shaped bench in the northeast corner for tasks requiring a hand turned metal working lathe.

(3) Attic: The attic is an unfinished, partially floored open storage space running the full length and depth of the shop building.

c. Barn:

(1) First floor: The stable is divided into three unequal size bays. The central bay is a 5'-4" runway running the depth of the building with overhead access to the loft at the north end. On the east side of the runway is a wagon bay 11'-1" x 18". On the west side of the runway is the stabling 11'-8" x 18'. The stable was originally subdivided with stud walls into three stalls entered through the west elevation. The stalls were 5'-6" in width.

(2) Attic: The barn loft, 28'-8" x 18' is open to the roof and was used for the storage of hay and fodder. A large south gable-end window provided access to the loft from the outside.

2. Stairways:

a. Dwelling: The main stair is an enclosed winder located in the northeast corner of hte southeast room. The 3'-3" x 2'-7" stair closet contains 5 treads in each 90° turn. A ladder stair to the basement is located in the northwest corner of the northeast room. A second enclosed winder stair with continuous winders is located in the northwest corner of the northeast room.

b. Agricultural Works: A single stair 3' wide with 10" treads runs from 7' inside the south elevation to the second floor. The stair is completely enclosed with a vertical board wall.

c. Barn: Access to the loft is gained by ladder through a 3' x 2'-7" overhead opening in the northeast corner of the runway bay.

3. Flooring:

a. Dwelling: Original flooring 1" thick and ranging from 1' to 5" across were used throughout the house. On the first and second floors the original boards are covered with 1" x 3 1/4" tongue-and-groove hardwood floors.

b. Agricultural Works: The first story floor is of packed earth while the second story floor is of 1" x 1'-2" milled tongue and groove board.

c. Barn: The first story floor is of packed earth covered in places with concrete slabs. The runway is floored over with milled boards. The loft is floored with milled 1' x 12" boards.

4. Wall and Ceiling Finish:

a. Dwelling: Walls and ceilings are plastered over sawn wood lath. The second floor ceiling joists were originally exposed and whitewashed.

b. Agricultural Works: Walls and ceilings are unfinished with exposed framing. The stair and partition walls are of vertical board siding. The legend "A Wilson's Agricultural Works Newark, Del." is stenciled on the west wall of the west partition wall of the stairwell and on the north wall of the second bay in from the east gable end of the second story.

c. Barn: Walls and ceilings are unfinished with exposed framing.

5. Doorways and doors:

a. Dwelling: Openings were framed with 3" board surrounds finished with quarter round moldings 1" thick for windows and 1/4" thick beads for interior doorways.

b. Agricultural Works: Board-and-battan doors open into the stair, the office, and first floor partition. These doors average 2'-5" in width.

6. Decorative Features:

   a. Dwelling: Two mantels graced the southern rooms of the first floor. The simpler mantel in the southwest room consisted half-round beaded trim defining an unornamented architrave. A singel raised panel with a molded cornice spanned the area over the hearth opening. The southeast room's mantel possessed an architrave containing two half round pilasters rising from unornamented block plinths to carry a bracket supported shelf. The space between the brackets contained a shallow panel with slightly quirked edges defined by a series of ogee mouldings. Both mantels have been removed. Baseboards throughout the house are plain boards topped with quarter round or ogee trim. No chairrail, panelling or other notable trim survive in the dwelling.

7. Heating:

   a. Dwelling: There are two fireplaces on the first floor and one kitchen hearth in the cellar. The first floor hearth openings are 2'-8" wide x 2'-6" high and 1'-3" deep. The hearth beds are 4"-6" x 1'-4" and brick paved. The cellar hearth is 4'-2" x 4'-2", 1'-6" deep with sequentially arched opening and a 2' 7'-6" brick paved bed. The upper floors were heated with cast iron parlor stoves feeding into the main flues.

      Modern beating is done through hot water radiators in each room heated from an oil fired boiler.

D. Site:

1. General setting: The house faces south onto Route 4 (Chestnut Hill Road). The portions of the lot fronting the street have been condemned for a highway improvement project.

2. Outbuildings: The Alexander Wilson Complex includes a small frame barn and agricultural works. See preceding descriptions.

PART III. SOURCES OF INFORMATION

A. Maps and Atlases

G. William Baist, ATLAS OF NEW CASTLE COUNTY, DELAWARE, (Philadelphia: G. William Baist, 1893).

D. G. Beers, ATLAS OF THE STATE OF DELAWARE, (Philadelphia: Pomeroy and Beers, 1868).

S. N. Beers and D. J. Lake, MAP OF THE VICINITY OF PHILADELPHIA, (Philadelphia: John E. Gillette and C. K. Stone, 1860).

G. M. Hopkins, MAP OF NEW CASTLE COUNTY, DELAWARE, (Philadelphia: G. M. Hopkins & Co., 1881).

Sam'l Rea and Jacob Price, MAP OF NEW CASTLE COUNTY, DELAWARE, (Philadelphia: Smith & Wistar, 1849).

B. Primary and Manuscript Sources: Delaware State Archives (DSA), Dover, Delaware

New Castle County Deed Books

New Castle County Probate Records

New Castle County Orphans Court

New Castle County Manuscript Population Census Returns, 1850 - 1890

New Castle County Manuscript Agricultural Census Returns, 1850 - 1890

C. Additional Primary Sources

Alexander Wilson Business Correspondence, 1850-1890, (Special Collections, Morris Library, University of Delaware).

Alexander Wilson Account Books, 1850-1900, (Collection of Sarah Wilson Slack, Newark, Delaware).

Project Information:

The Alexander Wilson Complex was recorded in 1982 and 1983 under the supervision of Bernard L. Herman, College of Urban Affairs and Public Policy, University of Delaware. The first recording project was funded in the summer of 1982 through the University of Delaware Research Foundation and the American Studies Program, University of Delaware. During that period only the Agricultural Works was recorded. In 1983 funding was obtained from the Delaware Department of Transportation to complete the recording of the aite prior to the demolition of the buildings for a highway improvement project.

The personnel involved in recording the Alexander Wilson Complex included: Bernard L. Herman, project supervisor and architectural historian; Kevin Cunningham, coordinator with the Delaware Department of Highways; David L. Ames, photographer; Stephen Del Sordo, historian; Charles Bergengren, Melinda Fike, Brian Fletcher, Deborah Jansen, and William Macintire, field recorders and draughtsmen.